



MATERIAL SAFETY DATA SHEET¹

PRODUCT NAME: TM-Biocontrol	CHEMICAL NAME: Nucleopolyhedrosis Virus of the Douglas-fir Tussock Moth, <i>Orgia pseudotsugata</i>
FORMULA: As a biological organism, this a.i. does not lend itself to characterization by normal pesticide criteria.	MOLECULAR WEIGHT: Not Applicable
SYNONYMS: Not Applicable	CHEMICAL FAMILY: Not Applicable

I. PHYSICAL DATA

BOILING POINT: Not Applicable	FREEZING POINT: Not Applicable
SPECIFIC GRAVITY (H ₂ O=1): Not Applicable	VAPOR PRESSURE (MM Hg): Not Applicable
VAPOR DENSITY (AIR=1): Not Applicable	EVAPORATION RATE (Butyl Acetate=1): Not Applicable
% VOLATILES BY VOLUME: Not Applicable	SOLUBILITY IN WATER (% by wt): Insoluble
APPEARANCE AND ODOR: Dried Insect body parts and virus polyhedral; musty odor.	

II. HAZARDOUS INGREDIENTS

MATERIAL	PERCENT	TLV (Units)
Nucleopolyhedrosis virus	11.6%	Not Applicable
Impurities: Insect parts and inert solids	88.4%	Not Applicable
This virus is non-toxic to warm blooded animals. Impurities may cause eye irritation.		

III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): Not Applicable	FLAMMABLE LIMITS: Not Applicable
EXTINGUISHING MEDIA: This material burns with difficulty. Use water on burning container.	
SPECIAL FIRE FIGHTING PROCEDURES: None except to avoid inhalation of particulates released by fire.	
UNUSUAL FIRE AND EXPLOSION HAZARDS: Not Applicable	

¹ Prepared in compliance with the US Department of Labor, Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200). September 1997.

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: The acute oral LD₅₀ is greater than 5000 mg/kg-b.w. in rats; indicating that the product is practically non-toxic by ingesting a single dose. The acute dermal LD₅₀ is greater than 2000 mg/kg-b.w. in rabbits; indicating that the material is no more than slightly toxic from exposure to the skin. The acute inhalation is greater than 2 mg/L, indicating that the product is practically non-toxic if inhaled. This product was found to be a temporary eye irritant to rabbits.

EFFECTS OF OVEREXPOSURE: None known

EMERGENCY AND FIRST AID PROCEDURES	Remove from exposure situation. If in eyes, flush with plenty of water. If irritation persists, get medical attention. If on skin, wash with soap and water.
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NOTES TO PHYSICIAN	Prolonged exposure may cause allergies and hypersensitivity in some individuals.
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V. REACTIVITY DATA

STABILITY: UNSTABLE ☐ STABLE ☒

CONDITIONS TO AVOID	Do not store in direct sunlight or at temperatures above 80° F.
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INCOMPATIBILITY (materials to avoid)	Not Applicable
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HAZARDOUS DECOMPOSITION PRODUCTS	Not Applicable
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HAZARDOUS POLYMERIZATION: MAY OCCUR ☐ WILL NOT OCCUR ☒

CONDITIONS TO AVOID	None
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VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Containment and cleanup by placing in a sealable container for transport to an approved landfill or other disposal site.
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WASTE DISPOSAL METHOD	Burn empty bags or triple rinse containers and dispose of them at an approved site. Waste from this product may be disposed of on site or at an approved disposal site.
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VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	Use normal work clothing and medical face mask as appropriate.
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VENTILATION: LOCAL EXHAUST	Preferable
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MECHANICAL (general)	Acceptable
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PROTECTIVE CLOTHING	Goggles and medical face mask are required by mixers.
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OTHER PROTECTIVE EQUIPMENT	Have eyewash, soap, and water available at project location.
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VIII. SPECIAL PRECAUTIONS

PRECAUTIONARY LABELING	Keep out of reach of children.
	Avoid direct application to water.
	Do not contaminate water, food or feed by inappropriate storage and disposal.
	Only for use as a biological insecticide for wide-area public Douglas-fir tussock moth control programs sponsored by government entities, and limited to forest and non-commercial trees.
OTHER HANDLING AND STORAGE CONDITIONS	Avoid heat and direct sunlight. Freezing temperatures are recommended for long-term storage.
	Wastes from this product may be disposed of on site or at an approved waste disposal facility.
	Do not reuse empty containers but arrange for disposal in a sanitary landfill or by incineration.
DEPARTMENT OF TRANSPORTATION	HAZARD CLASSIFICATION: Non-hazardous, non-toxic
	SHIPPING NAME: Nucleopolyhedrosis Virus
EPA REGISTRATION #	27586-1
NAME	Nucleopolyhedrosis Virus

The USDA Forest Service (FS believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted. The data are not to be taken as a warranty or representation for which the FS assumes legal responsibility. They are offered solely for your cooperation, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State and local laws and regulations.

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